BEFORE THE STATE OF WASHINGTON
ENERGY FACILITY SITE EVALUATION COUNCIL

In the Matter of Application No. 96-1, Olympic Pipe Line Company Cross Cascade Pipeline Project	EXHIBIT _____ (EA-T)

PREFILED DIRECT TESTIMONY

WASHINGTON DEPARTMENT OF FISH & WILDLIFE

WITNESS: ERIC ANDERSON

(Fish and Wildlife Resources and Project Impacts: Snoqualmie Pass to Columbia River)

Q: Please state your name, business address, position, professional experience, and education.

A: My name is Eric Anderson. My business address is Department of Fish and Wildlife, 1701 S. 24th Ave., Yakima, WA 98902. I am District Fish Biologist in Yakima and Kittitas Counties for the Washington Department of Fish and Wildlife (WDFW). My duties include planning, coordinating and implementing all professional fish management activities for all waters in the two-county area. My primary responsibilities are to manage each body of water with the goal to preserve, protect and perpetuate the inland (resident) fish resources while maximizing recreational opportunity with special emphasis on maintaining healthy wild native fish stocks. Part of my duties also include assisting WDFW staff with anadromous fish (salmon, steelhead) management and restoration.

I have worked as a district fish biologist since 1988. In 1993, while on a special assignment, I assisted with the development of the Washington State Bull Trout/Dolly Varden Management Plan Programmatic Environmental Impact Statement. Prior to my employment as a district fish biologist, I worked for the WDFW as a supervisor of the Snake River Fish Counting Projects. My prior work history also includes employment as a fisheries research biologist for the Upper Columbia United Tribes.

In the course of my present duties with WDFW, I inventory fish species in streams and lakes; plan and conduct spawning ground surveys; determine the status of fish stocks;

quantify angler use and harvest; set fish stocking levels in lakes and ponds; write fishing regulations; review and comment on development projects that may affect the fisheries resources in my district; summarize data and write reports.

My education includes a Master of Science in Biology from Eastern Washington University and my thesis work involved the food habits of fish. I have a diverse background in fish management and limnology applications (limnology is the science of fresh waters, and refers to the study of both standing and flowing aquatic systems, it includes physical, chemical and biological components). I have co-authored a number of publications and reports involving fish community structure and dynamics

Q: What is the purpose of your testimony?

A: The primary purpose of my testimony is to provide information on the resident and anadromous fish species present along the proposed Cross Cascade Pipeline route in the upper Yakima River basin. My district covers the proposed route from Snoqualmie Pass eastward along the Yakima River corridor to the Columbia River. While I am concerned about a number of potential construction and operation impacts, my most significant concerns are the potential for increased sedimentation and flow alteration from trenching and other activities near waterways. Obviously, potential spill or breeching of the line would be devastating as well, particularly on threatened and sensitive species. These and other species of special concern are noted in the following discussion.

Generally speaking, the Department reviews projects like the pipeline by examining the impacts through three "screens." The first screen is that mandated by statute, that is to preserve, protect and perpetuate the fish and wildlife resources. By this screen, the Department attempts to protect and at least consider the impacts to the ecosystem as a whole. The ecosystem is important because it provides the fundamental building blocks and support systems for all of the fish and wildlife resources. The second screen focuses on the resources which are socially; culturally; economically; historically; or otherwise held more important or interesting by the public. Salmon and steelhead, along with the other recreationally fished species are examples of these resources. Biologically speaking, when considering the health of the ecosystem, some of the lesser known species are probably equally important to the more publicly appreciated species such as salmon or steelhead. However, the Department focuses more resources on the second screen resources because of the increased demands and interactions with the public. The third screen identifies those resources which become significant due to their drop in population size or loss of habitat sufficient to cause species peril or possible extinction. Clearly, the Department puts a high priority on those species which are both important to the public and also in difficult straits.

My testimony below will identify the fish resources, their status and importance. I also pose several major concerns about the impacts of the pipeline to the fishery resource and their habitat. Beyond protecting remaining ecosystem habitats, my testimony focuses on the impacts to those fish resources which are either in difficult situations or are those

usually most important to the public.

Q: What resident native salmonid fish species are in the Project area and are there any of special concern?

A: Resident native salmonids (i.e., non migratory trout and whitefish originating in the area) that currently exist in streams and lakes of the upper Yakima basin (along the pipeline route) include bull trout (*Salvelinus confluentus*), westslope cutthroat trout (*Oncorhynchus clarki*), rainbow trout (*Oncorhynchus mykiss*), kokanee (*Oncorhynchus nerka*), mountain whitefish (*Prosopium williamsoni*) and pygmy whitefish (*Prosopium coulteri*). Eastern brook trout (*Salvelinus fontinalis*) a non native (introduced) salmonid is also present. Of the species listed above, those of special concern or with special status designations include bull trout (listed as federal threatened), westslope cutthroat trout (status is under review by U. S. Fish and Wildlife Service), and pygmy whitefish (state sensitive).

The U.S. Fish and Wildlife Service (USFWS) is currently reviewing information on westslope cutthroat to determine if the species warrants listing under the federal Endangered Species Act. At least in the Yakima basin, westslope cutthroat appear to be fairly abundant and widely distributed, particularly in the upper reaches (higher elevations) of tributaries to Keechelus Lake and the Yakima River. Cutthroat, as well as other resident salmonid species provide recreational angling opportunities throughout the

upper basin. Resident rainbow trout and mountain whitefish angling in the upper Yakima River and in the lower reaches of tributary streams is extremely popular. In fact, the trout fishery in the upper Yakima River is considered one of the best "blue ribbon" catch-and-release fisheries in Washington State.

Q: What is the status of the anadromous fish species found in the Project area?

A: Because of their great economic, cultural, historical and aesthetic value, the health and well being of native anadromous species of fish such as salmon and steelhead, are a very great concern in the Yakima basin. All of the anadromous stocks in the Yakima basin are at depressed levels. Current efforts by state, federal and tribal entities to rebuild depressed salmon and steelhead runs in the Yakima basin has gained considerable notoriety throughout the Northwest. Millions of dollars have already been spent on habitat protection activities, including the maintenance of adequate fish flows, installation of fish screens to prevent stranding in irrigation canals and the construction of state of the art hatchery supplementation facilities (WDFW & Yakima Indian Nation, 1996). Anadromous species in the basin include steelhead trout (*Oncorhynchus mykiss*) (proposed as a federal threatened species), spring and fall chinook salmon (*Oncorhynchus tshawytscha*), and coho salmon (*Oncorhynchus kisutch*). Summer chinook may be extinct in the Yakima basin but that has not been confirmed. Wild native sockeye (*Oncorhynchus nerka*) are extinct but there are still a few stray hatchery fish that enter the Yakima River. Although wild native coho are also extinct, through recent re-

introductions of juvenile fish in recent years, adult coho are returning to Yakima River tributaries to spawn. Anadromous information derived from WDFW and YIN, 1996; WDF and WDW, 1992.

Yakima spring chinook spawning occurs in the vicinity of the pipeline route. Spring chinook spawn in the Yakima River from below Keechelus Dam downstream to Roza Dam and in the Cle Elum River as well as the Naches watershed. In the upper Yakima, spawning occurs in early to mid-September and usually peaks by late September. The fry emerge from the gravel from late March to early June. Coho and fall chinook spawn in mid to lower river areas downstream of the pipeline. Coho spawning occurs below Roza Dam and in the Naches arm; most fall chinook spawning occurs below Prosser Dam. Coho spawn in late October through November. Rainbow (steelhead) and cutthroat trout spawn from February through June. However, steelhead have been observed in the Ellensburg area spawning during the first week of July. Rainbow and cutthroat spawning generally occurs earlier at lower elevations and later in colder headwater streams. Bull trout spawn during September and early October (WDFW, 1998).

Q: What is the status of the other resident fish species in the Project area?

A: Thirty-seven resident non-salmonid species are present in the Yakima basin (information derived from Pearsons et al. 1998). The most abundant non-salmonids in the upper Yakima basin are speckled dace (*Rhinichthys osculus*), longnose dace (*Rhinichthys*

cataractae), redside shiners (*Richardsonius balteatus*), northern pikeminnow (*Ptychocheilus oregonensis*), largescale suckers (*Catostomus macrocheilus*), bridgelip suckers (*Catostomus columbianus*), and several sculpin species, including mottled, torent, piute and shorthead sculpins (*Cottus sp.).* Although these non-salmonid species do not receive the notoriety of salmonids (trout, salmon, steelhead) or other lower river non-salmonid game fish (such as bass and catfish) they are nevertheless an important component of the aquatic environment. Most serve as forage for other game and food fish. Burbot (*Lota lota*) is an important game fish present in Keechelus Lake.

Two other species although not as abundant as those listed above but important due to their status are mountain sucker (*Catostomus platyrhynchus*) (a state candidate species) and Pacific lamprey (*Lampetra tridentata*) (a federal species of concern). Mountain suckers occur in the vicinity of the pipeline route and it is possible that lamprey do as well, although few have been observed in the Yakima River. Although not listed in this affidavit, there are numerous fish species inhabiting the mid to lower zones of the Yakima River that may potentially be impacted by the proposed pipeline especially in the event of an accidental spill or breeching of the line further upstream. For a complete fish species list for the Yakima basin see Pearsons et al. 1998.

Q: What are your general concerns about the Project?

A: Although there may be little to no fish presence information in some Yakima River tributary streams (particularly unnamed streams), it is critically important to view all

streams (fish-bearing or not) as an integral part of the Yakima River ecosystem. They are part of the hydraulic flow regime and contribute vital minerals, nutrients and aquatic insect production to the Yakima River, as well as permanent or seasonal fish use.

Of particular concern is the proximity of the proposed pipeline to Keechelus Lake in the Snoqualmie Pass area and to the upper Yakima River in the Kittitas valley. The pipeline borders the southern shore of Keechelus Lake before it proceeds in an easterly direction along the Yakima River corridor where it will eventually cross the river. Throughout this route the pipeline will traverse numerous tributaries of Keechelus Lake and the Yakima River. This is a major concern, given the current depressed, sensitive and threatened condition of anadromous and resident fish in the area. Keechelus Lake contains an isolated stock of bull trout in very critical condition due to low population abundance (WDFW, 1998). Pygmy whitefish (a state sensitive species) also inhabit the lake. Bull trout are present in the mainstem Yakima River and have been encountered in some tributaries (such as the Swauk and Teanaway system). However, they appear to be in very low abundance as evidenced by fishery surveys conducted in recent years (Todd Pearsons, Personal communication, WDFW).

A breech or break in the pipeline with the resulting spill into the Yakima River or a tributary stream of the Yakima or even into the groundwater would likely be catastrophic for all aquatic life (and many terrestrial forms) for many miles downstream. Even without a spill, increased sedimentation from construction and operation activities will affect fish life by smothering the eggs and young fry while they are in the gravel thereby

reducing the number of surviving progeny. While the direct impacts on the spawning habitat may persist for only a few years, the impacts to fish stocks would persist for a much longer period of time due to fewer spawning adults.

Potential flow alterations and de-watering of streams via trenching operations pose a very real concern in tributaries of the upper Yakima. Trenches dug under or near tributary streams may affect ground water hydraulics and cause streams to leak into these trenches thus lowering stream flows or causing stream channels to go dry. Such a condition would impose blocks to fish migration and would also strand fish, thus increasing mortality rates.

The Yakima River basin cannot afford the impacts imposed by this pipeline, especially in view of a growing list of threatened, depressed and sensitive species.

END OF DIRECT TESTIMONY

I declare under penalty of perjury that the above testimony is true and correct to the best of my knowledge.

EXECUTED this _____ day of February, 1999.

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ERIC ANDERSON